

< TEST

Biology Chemistry Physics English

1) **Pick up non-steroidal hormone:**

- | | |
|-------------|----------------|
| A) Androgen | C) Aldosterone |
| B) Estrogen | D) Oxytocin |

☐ A ☐ B ☐ C ☐ D

2) **Identify endocrine gland:**

- | | |
|-------------------|------------------|
| A) Salivary gland | C) Adrenal gland |
| B) Sweat gland | D) Pancreas |

☐ A ☐ B ☐ C ☐ D

3) **Endocrine system consists of:**

- | | |
|------------------------|------------------------|
| A) 10 endocrine glands | C) 15 endocrine glands |
| B) 20 endocrine glands | D) 25 endocrine glands |

☐ A ☐ B ☐ C ☐ D

4) **Which lobe of pituitary gland is called master gland?**

- | | |
|-------------|--------------|
| A) Anterior | C) Posterior |
| B) Middle | D) Lateral |

☐ A ☐ B ☐ C ☐ D

5) **It is characterized by enlarging the hands, feet, skull, nose and jaw bone:**

- | | |
|---------------|--------------|
| A) Dwarfism | C) Gigantism |
| B) Acromegaly | D) Myxedema |

☐ A ☐ B ☐ C ☐ D

6) **The blood calcium level is lowered by the deficiency of:**

- | | |
|-----------------|---------------|
| A) Adrenaline | C) Thyroxine |
| B) Parathormone | D) Calcitonin |

☐ A ☐ B ☐ C ☐ D

7) **Calcitonin is secreted by:**

- | | |
|----------------------|------------------|
| A) Pituitary gland | C) Adrenal gland |
| B) Parathyroid gland | D) Thyroid gland |

☐ A ☐ B ☐ C ☐ D

8) **It increases the rate of breakdown of fats:**

- | | |
|-------------|----------------|
| A) Glucagon | C) Cortisol |
| B) Insulin | D) Aldosterone |

☐ A ☐ B ☐ C ☐ D

9) Failure to produce insulin leads to a condition called:

- A) Diabetes insipidus C) Addison's disease
B) Diabetes mellitus D) Cushing's disease

☐ A ☐ B ☐ C ☐ D

10) Which one of the following is not involved in sugar metabolism?

- A) Insulin C) Cortisone
B) Glucagon D) Aldosterone

☐ A ☐ B ☐ C ☐ D

11) Insulin and glucagon are _____ in nature:

- A) Steroid C) Protein
B) Amino acid derivatives D) Polypeptide

☐ A ☐ B ☐ C ☐ D

12) On top of each kidney, there is present a/an:

- A) Adrenal gland C) Parathyroid gland
B) Thyroid gland D) Prostate gland

☐ A ☐ B ☐ C ☐ D

13) High Ca^{++} concentration in the blood causes stimulation of the synthesis and release of:

- A) Thyroxine C) Parathormone
B) Calcitonin D) Insulin

☐ A ☐ B ☐ C ☐ D

14) It is here that many of the sensory stimuli of nervous system are converted into hormonal responses:

- A) Hypothalamus C) Adrenal gland
B) Pituitary gland D) Thyroid gland

☐ A ☐ B ☐ C ☐ D

15) Development of secondary male characteristics is caused by:

- A) Androgens C) Corticosterones
B) Aldosterone D) Cortisol

☐ A ☐ B ☐ C ☐ D

16) Low calcium in the body fluid may be the cause of:

- A) Tetany C) Anemia
B) Kidney stones D) Goiter

☐ A ☐ B ☐ C ☐ D

17) In male luteinizing hormones is called:

- A) Follicle stimulating hormone
B) Interstitial cell stimulating hormone
C) Luteotropic hormone
D) Prolactin inhibiting hormone

☐ A ☐ B ☐ C ☐ D

18) Decrease in blood pressure, blood volume, and osmotic pressure of the blood causes the secretion of:

- A) MSH C) Vasopressin
B) Oxytocin D) TSH

☐ A ☐ B ☐ C ☐ D

- 19) Both of them are secreted in stress situations:
A) Aldosterone and corticosterone
B) Androgen and aldosterone
C) Glucocorticoid and mineralocorticoid
D) Adrenaline and nor-adrenaline
☐ A ☐ B ☐ C ☐ D
- 20) Alpha cells of pancreas secrete:
A) Insulin
B) ADH
C) Glucagon
D) Aldosterone
☐ A ☐ B ☐ C ☐ D
- 21) A hormone which is produced by the ruptured follicle in response to LH from the pituitary is:
A) Estrogens
B) Progesterone
C) Androgens
D) FSH
☐ A ☐ B ☐ C ☐ D
- 22) Too much cortical hormones are produced in:
A) Grave's disease
B) Cushing's disease
C) Addison's disease
D) Parkinson's disease
☐ A ☐ B ☐ C ☐ D
- 23) Hormone that may have a primary role in many circadian rhythms:
A) Adrenaline
B) Melatonin
C) Insulin
D) Epinephrine
☐ A ☐ B ☐ C ☐ D
- 24) Pick up male sex hormone:
A) Estrogen
B) Parathormone
C) Progesterone
D) Androgen
☐ A ☐ B ☐ C ☐ D
- 25) Oxytocin production during labor is an example of:
A) Negative feed back mechanism
B) Positive feed back mechanism
C) Feedback inhibition
D) Precursor activation
☐ A ☐ B ☐ C ☐ D
- 26) Which of the following hormone acts on the uterus wall for thickening?
A) Progesterone
B) Oxytocin
C) Follicle stimulating hormone
D) Androgen
☐ A ☐ B ☐ C ☐ D
- 27) Both ovarian cycle and uterine cycle are regulated by pituitary:
A) Somatotropins
B) Thyrotropins
C) Gonadotropins
D) Corticotrophins
☐ A ☐ B ☐ C ☐ D

- 28) Menstrual flow occurs due to lack of:
A) Estrogen C) LH
B) Progesterone D) FSH
- ☐ A ☐ B ☐ C ☐ D
- 29) In human female, ovulation stage of ovarian cycle almost coincides with the _____ of uterine cycle:
A) Completion of secretory phase
B) Initiation of secretory phase
C) Mid of proliferative phase
D) Initiation of proliferative phase
- ☐ A ☐ B ☐ C ☐ D
- 30) A yellowish glandular structure formed in the ovary secretes:
A) LH C) Progesterone
B) FSH D) Estrogen
- ☐ A ☐ B ☐ C ☐ D
- 31) AIDS is a sexually transmitted disease which is caused by:
A) *Treponema pallidum*
B) *Neisseria gonorrhoeae*
C) *Mycobacterium tuberculosis*
D) Human immunodeficiency virus
- ☐ A ☐ B ☐ C ☐ D
- 32) Pick up the wrong one:
A) Ovary under the influence of FSH, produces estrogen hormone
B) Estrogen stimulates the formation of endometrium
C) FSH vascularizes the endometrium
D) Estrogen inhibits the secretion of FSH
- ☐ A ☐ B ☐ C ☐ D
- 33) Preparation of uterine wall for implantation is induced by:
A) Androgen C) LH
B) FSH D) Progesterone
- ☐ A ☐ B ☐ C ☐ D
- 34) Corpus luteum is a modified form of:
A) Ruptured follicles C) Primary follicles
B) Degenerated follicles D) Ruptured ovary
- ☐ A ☐ B ☐ C ☐ D
- 35) Discharge of blood and cell debris from vagina after few days of ovulation is called:
A) After birth C) Luteinization
B) Menstruation D) Parturition
- ☐ A ☐ B ☐ C ☐ D
- 36) In human only one ovum is usually discharged from the ovary at one time. This phenomenon is called:
A) Menstruation C) Fertilization
B) Menopause D) Ovulation
- ☐ A ☐ B ☐ C ☐ D
- 37) The events of the _____ occur in uterus and

ovaries:

- A) Life cycle
- B) Menstrual cycle
- C) Oestrous cycle
- D) Uterine cycle

☐ A ☐ B ☐ C ☐ D

38) The HIV attacks on specific type of white blood cells called:

- A) T-cells
- B) B-cells
- C) Basophiles
- D) Neutrophils

☐ A ☐ B ☐ C ☐ D

39) The hormone which is a major constitute of birth control pill:

- A) Oestrogen
- B) LH
- C) Progesterone
- D) Testosterone

☐ A ☐ B ☐ C ☐ D

40) In the fertile female, approximately on which day of the menstrual cycle does ovulation take place:

- A) Day 1
- B) Day 8
- C) Day 14
- D) Day 20

☐ A ☐ B ☐ C ☐ D

41) Ovulation in the human female usually takes place during the menstrual cycle:

- A) Just before the end of the secretory phase
- B) At the mid secretory phase
- C) At the beginning of the proliferative phase
- D) At the end of the proliferative phase

☐ A ☐ B ☐ C ☐ D

42) Outer most covering of secondary oocyte is:

- A) Chorion
- B) Zona pellucida
- C) Capsule
- D) Cell membrane

☐ A ☐ B ☐ C ☐ D

43) Estrogen perform all of the following, EXCEPT:

- A) Secretions LH
- B) Ovulation
- C) Vascularization of endometrium
- D) Production of FSH

☐ A ☐ B ☐ C ☐ D

44) AIDS is caused by the human immunodeficiency virus (HIV) which destroys:

- A) CD₂ helper lymphocytes
- B) CD₄ helper lymphocytes
- C) CD₂₀ helper lymphocytes
- D) CD₁₀ helper lymphocytes

☐ A ☐ B ☐ C ☐ D

45) Pick up the correct matching of the events occurring during menstrual cycle:

- A) Menstruation: Breakdown of endometrium and fertilization
- B) Proliferative phase: Rapid degeneration of myometrium and maturation of graafian follicle
- C) Ovulation: Decrease of FSH and increase of estrogen which causes the pituitary gland to secrete LH
- D) Secretory phase: It take place of the beginning of the proliferative phase

☐ A ☐ B ☐ C ☐ D

46) Secondary source of secretion of progesterone is:

- A) Follicle C) Corpus luteum
B) Placenta D) Interstitial cells

☐ A ☐ B ☐ C ☐ D

47) Pick up the longest phase of uterine cycle in human female:

- A) Menstruation C) Secretory
B) Proliferative D) Ovulation

☐ A ☐ B ☐ C ☐ D

48) The reproductive cycle in human being is called:

- A) Oestrus cycle C) Calvin cycle
B) Krebs cycle D) Menstrual cycle

☐ A ☐ B ☐ C ☐ D

49) Which one of the following stages of ovarian cycle, coincides with start of menstruation?

- A) Developing follicle stage
B) Mature follicle stage
C) Early corpus luteum stage
D) Regressive corpus luteum stage

☐ A ☐ B ☐ C ☐ D

50) It does not occur between 15-28 days of menstrual cycle:

- A) Luteal phase C) Post ovulatory phase
B) Proliferative phase D) Secretory phase

☐ A ☐ B ☐ C ☐ D

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Biology **Chemistry** Physics English

51) Which one of the following pair of reaction types is included in the reaction sequence below?

- $\text{CH}_3\text{CH}=\text{CHCH}_3 + \text{HI} \xrightarrow{\text{CH}_3\text{COOH}} \text{CH}_3\text{CH}_2\text{CHICH}_3$
- $\text{CH}_3\text{CH}_2\text{CHICH}_3 + \text{NaOH}_{(\text{aq})} \longrightarrow \text{CH}_3\text{CH}_2\text{CH}(\text{OH})\text{CH}_3$

- A) Electrophilic addition and electrophilic substitution
B) Electrophilic addition and nucleophilic substitution
C) Free radical addition and nucleophilic substitution
D) Free radical addition and electrophilic substitution

☐ A ☐ B ☐ C ☐ D

52) Which of the following statements is not matched correctly w.r.t. reaction of methanol with the given reagents?

- A) $2\text{CH}_3-\text{OH} + 2\text{Na} \longrightarrow 2\text{CH}_3\text{O}^-\text{Na}^+ + \text{H}_2$
B) $\text{CH}_3-\text{OH} + \text{PCl}_5 \longrightarrow \text{CH}_3-\text{Cl} + \text{POCl}_3$
C) $\text{CH}_3-\text{OH} + [\text{O}] \xrightarrow{\text{K}_2\text{Cr}_2\text{O}_7/\text{dil. H}_2\text{SO}_4} \text{H}-\text{COOH}$
D) $\text{CH}_3-\text{OH} + \text{SOCl}_2 \xrightarrow{\text{Pyridine}} \text{CH}_3-\text{Cl} + \text{SO}_2 + \text{HCl}$

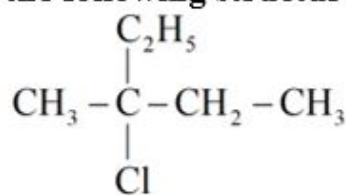
☐ A ☐ B ☐ C ☐ D

53) Which one of the following statements is incorrect for $\text{S}_{\text{N}}1$ mechanism reaction w.r.t alkyl halide?

- A) It is two step mechanism
B) It is unimolecular reaction
C) Its rate of reaction depends on the conc. of alkyl halide
D) Its rate of reaction depends on the strength of attacking nucleophile

☐ A ☐ B ☐ C ☐ D

54) Consider the following structure of alkyl halide:



The correct name of the given structure of alkyl halide is:

- A) 1-Chloro-1-methylpentane
- B) 3-Chloro-2-methylpentane
- C) 2-Chloro-3-methylpentane
- D) 3-Chloro-3-methylpentane

☐ A ☐ B ☐ C ☐ D

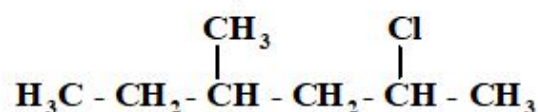
55) Which one of the following is a correct statement about the two alkenes

$\text{CH}_3 - \text{CH}_2 - \text{CH} = \text{CH}_2$ and $\text{CH}_3 - \text{CH} = \text{CH} - \text{CH}_3$?

- A) Neither may be polymerized
- B) Neither reacts with bromine to give 1,4-Dibromobutane
- C) Neither reacts with hydrogen to form butane
- D) Neither exhibits cis-trans isomerism

☐ A ☐ B ☐ C ☐ D

56) Consider the following structural formula:



The correct name according to IUPAC is:

- A) 2-Chloro-3-methylhexane
- B) 3-Methyl-4-chlorohexane
- C) 2-Chloro-4-methylhexane
- D) 3-Chloro-2-methylhexane

☐ A ☐ B ☐ C ☐ D

57) In the presence of strong base and polar solvent secondary alkyl halide undergoes through _____ reaction?

- A) E2
- B) E1
- C) S_N1
- D) S_N2

☐ A ☐ B ☐ C ☐ D

58) Elimination bimolecular reactions involve:

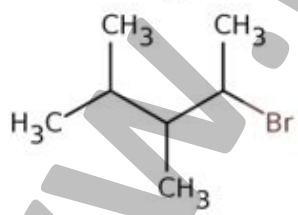
- A) First order kinetics
- B) Second order kinetics
- C) Zero order kinetics
- D) Third order kinetics

☐ A ☐ B ☐ C ☐ D

59) Alkyl halides (Halogenoalkanes) show which of the following types of reaction:

- A) Nucleophilic substitution reaction
- B) Electrophilic substitution reaction
- C) Nucleophilic addition reaction
- D) Oxidation reduction reaction

☐ A ☐ B ☐ C ☐ D

- 60) Consider the following reaction
 $\text{C}_2\text{H}_5\text{OH} + \text{SOCl}_2 \xrightarrow{\text{Pyridine}}$
 Which product may be formed?
 A) $\text{C}_2\text{H}_5\text{Cl}$, SO_2 , HCl C) $\text{C}_2\text{H}_5\text{Cl}$ only
 B) $\text{C}_2\text{H}_5\text{Cl}$, HCl D) $\text{C}_2\text{H}_5\text{Cl}$, SO , HCl
- ☐ A ☐ B ☐ C ☐ D
- 61) Alkyl halides show β -elimination reaction. Which is the incorrect statement about E1 elimination mechanism?
 A) It is two step reaction
 B) It is unimolecular
 C) It depends on the strength of nucleophile
 D) Ter-alkyl halides follow E1 elimination reaction
- ☐ A ☐ B ☐ C ☐ D
- 62) Consider the following structure:
 $\text{CH}_3\text{-CH-CH}_2\text{-CH}_2\text{-CH}_2\text{-OH}$
 $\begin{array}{c} | \\ \text{Cl} \end{array}$
 What is the most correct name of the above given structure according to IUPAC?
 A) 4-Chloro-1-pentanol
 B) 2-Chloro-4-pentanol
 C) 1-Chloro-4-pentanol
 D) 4-Chloro-3-pentanol
- ☐ A ☐ B ☐ C ☐ D
- 63) Which of the following compounds is used as an inert solvent?
 A) CCl_4 C) CH_2Cl_2
 B) CHCl_3 D) CF_2Cl_2
- ☐ A ☐ B ☐ C ☐ D
- 64) Which is an intermediate compound formed in $\text{S}_\text{N}1$ mechanism reaction?
 A) Ethoxide ion C) Alkene
 B) Alkyl halide D) Carbocation
- ☐ A ☐ B ☐ C ☐ D
- 65) Consider the following structure.
- 
- Which of the following is the correct name according to IUPAC?
 A) 2-Bromo-3,4-dimethylpentane
 B) 5-Bromo-3,4-dimethylpentane
 C) 2,3-Dimethyl-5-bromopentane
 D) 1-Bromo-2,3,4-dimethylbutane
- ☐ A ☐ B ☐ C ☐ D
- 66) Alkyl halides are considered to be very reactive compounds towards nucleophiles because:
 A) They have an electrophilic carbon
 B) They have an electrophilic carbon and a good leaving group
 C) They have a nucleophilic carbon and a good leaving group
 D) They have an electrophilic carbon and bad leaving group

☐ A ☐ B ☐ C ☐ D

67) Which of the following is comparatively a better leaving group?

- A) OH^- C) NH_2^-
B) OR^- D) HSO_4^-

☐ A ☐ B ☐ C ☐ D

68) In primary alkyl halides the halogen atom is attached to a carbon which is further attached to how many carbon atoms?

- A) 2 C) 1
B) 3 D) 4

☐ A ☐ B ☐ C ☐ D

69) $\text{S}_{\text{N}}2$ reaction can be best carried out with:

- A) Primary alkyl halides
B) Secondary alkyl halides
C) Tertiary alkyl halides
D) Neo alkyl halides

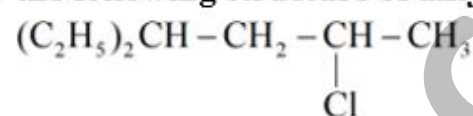
☐ A ☐ B ☐ C ☐ D

70) Which of the following compounds could be prepared by reacting bromoethane with potassium cyanide and then reducing the product:

- A) CH_3CH_3 C) $\text{CH}_3\text{CH}_2\text{CH}_3$
B) $\text{CH}_3\text{CH}_2\text{NH}_2$ D) $\text{CH}_3\text{CH}_2\text{CH}_2\text{NH}_2$

☐ A ☐ B ☐ C ☐ D

71) Consider the following structure of alkyl halide:



The correct IUPAC name of the given structure is:

- A) 5-Chloro-3-ethylhexane
B) 2-Chloro-3-ethylhexane
C) 3-Ethyl-5-chlorohexane
D) 2-Chloro-4-ethylhexane

☐ A ☐ B ☐ C ☐ D

72) Halo-alkanes can be converted into higher alkanes by:

- A) Kolbe's electrolytic method
B) Wurtz's reaction
C) Hydrolysis reaction
D) Redox reaction

☐ A ☐ B ☐ C ☐ D

73) Which of the following is not a nucleophile?

- A) H_2O C) BF_3
B) H_2S D) NH_3

☐ A ☐ B ☐ C ☐ D

74) Double bond is formed as a result of:

- A) Substitution reaction
- B) Elimination reaction
- C) Addition reaction
- D) Rearrangement reaction

☐ A ☐ B ☐ C ☐ D

75) Which of the following alkyl halides cannot be formed by the direct reaction of alkanes with halogens?

- A) RBr
- B) RI
- C) RCl
- D) RF

☐ A ☐ B ☐ C ☐ D

76) Among the alkyl halides the tertiary alkyl halides follow the mechanism:

- A) S_N1
- B) S_N2
- C) Both A and B
- D) Neither A nor B

☐ A ☐ B ☐ C ☐ D

77) Which of the following has the highest nucleophilicity?

- A) F^-
- B) OH^-
- C) CH_3^-
- D) NH_2^-

☐ A ☐ B ☐ C ☐ D

78) In the addition of HBr to propene in the absence of peroxides the first step involves the addition:

- A) H^+
- B) Br^-
- C) $H^\bullet$
- D) $Br^\bullet$

☐ A ☐ B ☐ C ☐ D

79) Aryl halide and alkyl halide can react with sodium in presence of ether to form substituted benzene. This is in accordance to:

- A) Wurtz reaction
- B) Wurtz Fittig reaction
- C) Both A and B
- D) Neither A nor B

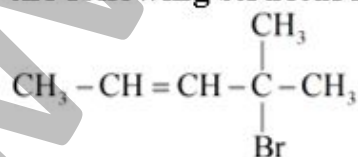
☐ A ☐ B ☐ C ☐ D

80) Which of these always applies to a nucleophile?

- A) It attacks a double bond
- B) It has a lone pair of electrons
- C) It is a single atom
- D) It is negatively charged

☐ A ☐ B ☐ C ☐ D

81) Consider the following structure of alkyl halide:

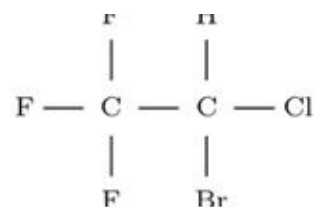


The correct IUPAC name of the given structure of alkyl halide is:

- A) 2-Bromo-2-ethylpent-3-ene
- B) 4-Bromo-4-methylpent-2-ene
- C) 2-Bromo-2-methylpent-3-ene
- D) 2-Bromo-3-methylpent-2-ene

☐ A ☐ B ☐ C ☐ D

82) Halothane is a widely used anaesthetic.



Which statements about halothane are correct?

- I. It is relatively unreactive.
 II. The molecule has a chiral centre.
 III. It may cause depletion of the ozone layer.

- A) I only
 B) II only
 C) II and III
 D) I, II and III

☐ A ☐ B ☐ C ☐ D

83) In the upper atmosphere chlorofluoroalkanes (CFCs) are broken down to give chlorine radical but not fluorine radicals. What is the best explanation for this?

- A) Fluorine is more electronegative than chlorine
 B) Fluorine radicals are less stable than chlorine radicals
 C) The C – F bond is stronger than the C – Cl bond
 D) The chlorine atom is larger in size than the fluorine atom

☐ A ☐ B ☐ C ☐ D

84) Which of the following C–X bond has greater bond energy in case of alkyl halide?

- A) C–F
 B) C–Br
 C) C–Cl
 D) C–I

☐ A ☐ B ☐ C ☐ D

85) In elimination reaction there is another site present in the alkyl halide molecule where the attacking reagent (base) can attack at the same time. Such a site is an electrophilic hydrogen atom (β -hydrogen is acidic in nature) which is attached to the β -carbon of the alkyl halide. When the attack takes place on hydrogen we get an alkene there are two types of elimination reactions (E1 and E2):

Which of the following statements is incorrect about E2 elimination reaction?

Opt.	E2 Elimination
A)	
B)	Rate of reaction = $k[\text{R-X}][\text{base}]$ it is bimolecular and shows second order kinetics
C)	Order of ease of E2 elimination reaction in alkyl halides is $3^\circ \text{ alkyl halide} > 1^\circ \text{ alkyl} > 2^\circ \text{ alkyl halide}$
D)	It completes in one step

☐ A ☐ B ☐ C ☐ D

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Biology Chemistry **Physics** English

- 86) The actual current through metals is:
A) Hole current C) Conventional current
B) Electronic current D) Ionic current

☐ A ☐ B ☐ C ☐ D

- 87) An electrical device sends 90 C charge through a conductor in 18 s. The current flowing is:
A) 5 A C) 7 A
B) 6 A D) 8 A

☐ A ☐ B ☐ C ☐ D

- 88) 1×10^7 electrons pass through a conductor in 1 μ s. The current in (mA) through the conductor is:
A) 1.6×10^{-6} C) 1.6×10^{-4}
B) 1.6×10^{-3} D) 1.6×10^{-5}

☐ A ☐ B ☐ C ☐ D

- 89) A current of 10 A is passing through a wire of cross section $4 \times 10^{-6} \text{ m}^2$. If the density of charge carriers in the wire is $5 \times 10^{26} / \text{m}^3$, the drift velocity of the electrons is:

A) $\frac{1 \text{ m}}{16 \text{ s}}$ C) $\frac{1 \text{ m}}{64 \text{ s}}$
B) $\frac{1 \text{ m}}{32 \text{ s}}$ D) $\frac{1 \text{ m}}{128 \text{ s}}$

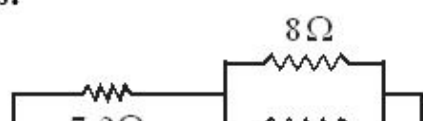
☐ A ☐ B ☐ C ☐ D

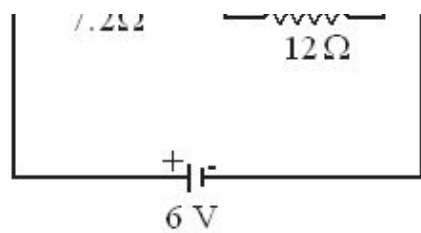
- 90) Three resistors draw respectively currents of 1 A, 2 A and 4 A when connected separately across a battery turn by turn. Now if they are connected in series and then the same battery is connected across their series combination, the current drawn will be:

A) $\frac{2}{7} \text{ A}$ C) $\frac{4}{7} \text{ A}$
B) $\frac{3}{7} \text{ A}$ D) $\frac{5}{7} \text{ A}$

☐ A ☐ B ☐ C ☐ D

- 91) In the given circuit the current drawn through battery is:

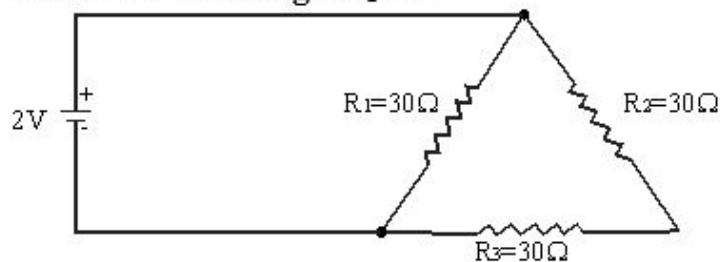




- A) 0.5 A
B) 1.0 A
C) 1.5 A
D) 2.0 A

☐ A ☐ B ☐ C ☐ D

92) The current through R_1 is:



- A) 33.3 mA
B) 66.6 mA
C) 10 mA
D) 0.1 A

☐ A ☐ B ☐ C ☐ D

93) The effective resistance of n identical resistors connected in parallel is x . If the resistors are connected in series, the effective resistance will be:

- A) nx
B) n^2x
C) $\frac{x}{n}$
D) $\frac{x}{n^2}$

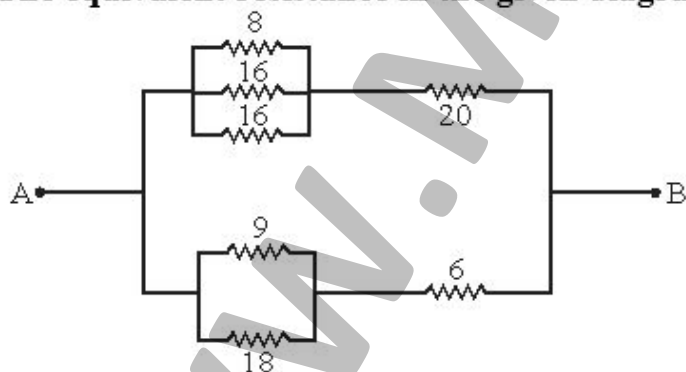
☐ A ☐ B ☐ C ☐ D

94) The resistance of a wire is R . It is cut into four equal parts and these parts are connected side by side. The effective resistance becomes:

- A) $\frac{R}{2}$
B) $\frac{R}{4}$
C) $\frac{R}{8}$
D) $\frac{R}{16}$

☐ A ☐ B ☐ C ☐ D

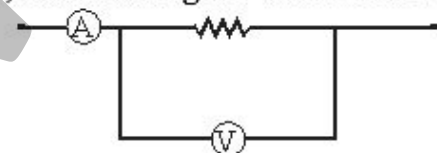
95) The equivalent resistance in the given diagram is:



- A) 6
B) 16
C) 8
D) 24

☐ A ☐ B ☐ C ☐ D

96) If the reading on the ammeter A decreases as shown in figure, the reading on voltmeter V:



- A) Decreases in the same ratio
B) Decreases but not in same ratio
C) Increases in the same ratio
D) Increases but not in same ratio

☐ A ☐ B ☐ C ☐ D

- 97) The resistance of a wire of uniform diameter d and length L is R . The resistance of another wire of another material with twice the resistivity than first wire, diameter $2d$ and length $4L$ will be:

A) $\frac{R}{4}$ C) $\frac{R}{2}$
B) R D) $2R$

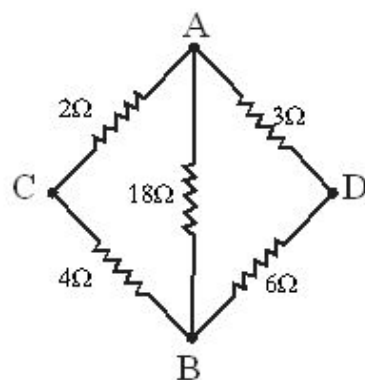
☐ A ☐ B ☐ C ☐ D

- 98) The effective resistance of two wires in parallel is $\frac{12}{7} \Omega$. If the resistance of one wire is 3Ω , that of other wire:

A) 2Ω C) 4Ω
B) 3Ω D) $\frac{5}{3} \Omega$

☐ A ☐ B ☐ C ☐ D

- 99) The effective resistance between A and B in the circuit is:



A) 2.5Ω C) 3.5Ω
B) 3.0Ω D) 4.0Ω

☐ A ☐ B ☐ C ☐ D

- 100) An electric current of 2 A is passing through a cross section of the coil in 1 second. How many electrons are involved in providing a current of 2 A ? The charge on one electron is $1.602 \times 10^{-19} \text{ C}$.

A) 3.21×10^{18} C) 2.2×10^{16}
B) 1.25×10^{19} D) 6.25×10^{18}

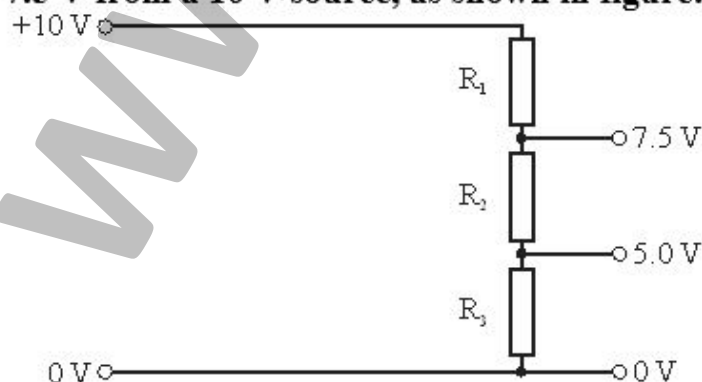
☐ A ☐ B ☐ C ☐ D

- 101) A wire of resistance 48Ω is bent in the form of an equilateral triangle. The resistance between two vertices is:

A) 9.7Ω C) 10.6Ω
B) 11.9Ω D) 12.4Ω

☐ A ☐ B ☐ C ☐ D

- 102) A potential divider is used to give outputs of 5.0 V and 7.5 V from a 10 V source, as shown in figure:



Which combination of resistances, R_1 , R_2 , R_3 gives the correct voltages?

	$R_1 (\text{k}\Omega)$	$R_2 (\text{k}\Omega)$	$R_3 (\text{k}\Omega)$
A)	1	1	2
B)	2	1	2
C)	3	2	2

D)	3	2	3
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- ☐ A ☐ B ☐ C ☐ D

103) The resistance of conductor depends on:

- A) Area of cross section of conductor
B) Physical state of conductor
C) Nature of conductor
D) All of these

- ☐ A ☐ B ☐ C ☐ D

104) A wire of length 10 m and radius 1 mm has a resistance of $3\ \Omega$. What length of a wire of same material but of radius 2 mm will have a resistance of $9\ \Omega$?

- A) 25 m C) 120 m
B) 60 m D) 100 m

- ☐ A ☐ B ☐ C ☐ D

105) Ohm's Law is valid when the temperature of the conductor is:

- A) Constant C) Very high
B) Very low D) Changing

- ☐ A ☐ B ☐ C ☐ D

106) A potential difference of 10 V is applied across a conductance of 4 mho. The current in the conductor is:

- A) 40 A C) 2.5 A
B) 2.4 A D) 3.0 A

- ☐ A ☐ B ☐ C ☐ D

107) A certain wire has a resistance R, the resistance of another wire of an identical material with the first, except for twice its diameter is:

- A) $\frac{1}{4}R$ C) 4 R
B) 2 R D) Same as R

- ☐ A ☐ B ☐ C ☐ D

108) If the temperature of a conductor is increased, the product of resistivity and conductivity:

- A) Increases
B) Remains constant
C) Decreases
D) May increase or decrease

- ☐ A ☐ B ☐ C ☐ D

109) If the resistivity of the conductor is $2 \times 10^{-6}\ \Omega m$ then its conductivity is:

- A) $2 \times 10^{-6}\ \Omega^{-1}m^{-1}$ C) $5 \times 10^{-5}\ \Omega^{-1}m^{-1}$
B) $5 \times 10^6\ \Omega^{-1}m^{-1}$ D) $5 \times 10^5\ \Omega^{-1}m^{-1}$

- ☐ A ☐ B ☐ C ☐ D

110) Siemen is a unit of conductance and it is equal to:

- A) ohm C) mho . m
B) mho D) mho . m^{-1}

- ☐ A ☐ B ☐ C ☐ D

111) Which one of the following materials is non-ohmic?

- A) Gold C) Conner

A) Carbon
B) Germanium

C) Copper
D) Silver

- ☐ A ☐ B ☐ C ☐ D

112) A high voltage in a TV receiver is 17 kV. Maximum allowable current is 150 μ A. What is least permissible value of load resistance?

- A) 113 M Ω C) 11.3 M Ω
B) 1130 M Ω D) 15.5 M Ω

- ☐ A ☐ B ☐ C ☐ D

113) Since $R = \frac{V}{I}$, so by doubling the voltage the resistance will:

- A) Double C) Four times
B) Half D) Remains the same

- ☐ A ☐ B ☐ C ☐ D

114) Resistivity is a property of materials provided that:

- A) Length remains the same
B) Area remains the same
C) Temperature remains the same
D) All of these

- ☐ A ☐ B ☐ C ☐ D

115) The temperature coefficient of resistance of a semiconductor is:

- A) Positive C) Imaginary
B) Negative D) Zero

- ☐ A ☐ B ☐ C ☐ D

PREVIOUS

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NEXT

< TEST

Biology Chemistry Physics **English**

- 116)** Directions: Read each sentence and determine the meaning of the word using cross sentence clues or your prior knowledge.

As she left the court, she was _____ by angry crowds who tried to block her way.

- A) Confronted C) Captivated
B) Enchanted D) Coveted

☐ A ☐ B ☐ C ☐ D

- 117)** The rain _____ loudly on the roof.

- A) Condescended C) Beckoned
B) Appraised D) Drummed

☐ A ☐ B ☐ C ☐ D

- 118)** The altercation was so _____ that eventually it got to the point where no one knew what was going on.

- A) Compelled C) Accentuated
B) Brimming D) Baffling

☐ A ☐ B ☐ C ☐ D

- 119)** Directions: Choose the most suitable answer that identifies the homophones in the sentence.

To prove his point to the jury, the lawyer will _____ the decision from a similar case.

- A) Site C) Cite
B) Sate D) Sight

☐ A ☐ B ☐ C ☐ D

- 120)** These enzymes _____ down food in the stomach

- A) Brake C) Brick
B) Break D) Bark

☐ A ☐ B ☐ C ☐ D

- 121)** Did you know that the electronic _____ of the magazine is free, but the print version costs \$8.99?

- A) Addition C) Incident
B) Edition D) Accident

☐ A ☐ B ☐ C ☐ D

122) Direction: Choose the word that is most nearly SIMILAR in the meaning of the following word.

BOON

A) Windfall

C) Bane

B) Befall

D) Ban

☐ A ☐ B ☐ C ☐ D

123) **BASHFUL**

A) Ally

C) Shy

B) Allay

D) Wry

☐ A ☐ B ☐ C ☐ D

124) **CAPACIOUS**

A) Percolated

C) Confined

B) Sophisticated

D) Commodious

☐ A ☐ B ☐ C ☐ D

125) **COAXED**

A) Strained

C) Waddled

B) Wheedled

D) Hobbled

☐ A ☐ B ☐ C ☐ D

126) **DISPUTE**

A) Rue

C) Raw

B) Hew

D) Row

☐ A ☐ B ☐ C ☐ D

127) Directions: Choose the word that is most OPPOSITE in the meaning of the following word.

ASTOUNDED

A) Atrocious

C) Flabbergasted

B) Curious

D) Enlighten

☐ A ☐ B ☐ C ☐ D

128) **BRISKLY**

A) Abruptly

C) Casually

B) Gently

D) Vigorously

☐ A ☐ B ☐ C ☐ D

129) **CRUELY**

A) Adroitly

C) Inexpertly

B) Raptly

D) Boorishly

☐ A ☐ B ☐ C ☐ D

130) **CONFINING**

A) Chaining

C) Emancipating

B) Scorching

D) Bewildering

☐ A ☐ B ☐ C ☐ D

131) **DISTRACT**

A) Befuddle

C) Terminate

B) Appraised

D) Concentrate

☐ A ☐ B ☐ C ☐ D

132) Directions: Choose the correct spelling:

A) Appalling
B) Appelling

C) Apalling
D) Appaling

☐ A ☐ B ☐ C ☐ D

133) A) Coutioned
B) Cautisoned

C) Cautioned
D) Cautionad

☐ A ☐ B ☐ C ☐ D

134) A) Berimming
B) Brimming

C) Briming
D) Barimming

☐ A ☐ B ☐ C ☐ D

135) A) Condecscended
B) Condiscended

C) Condescanded
D) Condescended

☐ A ☐ B ☐ C ☐ D

PREVIOUS

FINISH TEST